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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,373	03/04/2002	Hiroshi Ito	ARC920010125US1	7246

7590

05/01/2006

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EXAMINER

WALKE, AMANDA C

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,373

Applicant(s)

ITO, HIROSHI

Examiner

Amanda C. Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 4/17/2006, with respect to the rejection(s) of claim(s) 1-31 under U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection follows..

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al (6,908,724).

Araki et al disclose a fluorine-containing polymer for use as a chemically amplified photoresist. The polymer includes a variety of polymers and monomers, and may take the structure: M1-M2-M3-N, wherein M1 is of structure similar to the instant monomer II (see column 147-149), M2 is an alicyclic monomer, M3 is of structure similar to that of the instant monomer I (see column 158-159), and N is selected from monomers such as ethylene, vinyl ether, allyl, or the monomers described in columns 39-41 which are suitable to be combined with the novel fluorine-containing monomers (claim 16). The monomers described in columns 147-149 and 158-159 comprise groups falling within the scope of the instant claims 2-14. The compositions further comprises an acid generator (such as an onium salt as described in columns 62-93), and is a UV, specially VUV resist (157 nm; see abstract). Also, a solvent, an organic

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base, and optionally a crosslinker should the resist be a negative resist. The resist is then employed in a conventional method of forming a resist pattern columns 94-96 and examples in columns 215-219).

Given the teachings of the references, it would have been obvious to one of ordinary skill in the art to prepare the material of Araki et al choosing to employ the M1-M2-M3-N polymer either alone, or in combination with an additional novel polymer taught by the reference, which comprises monomers meeting the structural limitations of the instant monomers I and II, with reasonable expectation of achieving a material having high etching resistance.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takechi et al (6,329,125), Hatakeyama et al (6,835,524), and Ito et al (6,548,219) are cited for their teachings of similar monomers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C. Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amanda C Walke
Amanda C Walke
Primary Examiner
Art Unit 1752

ACW
April 28, 2006